

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME Singh, Amar V.		POSITION TITLE Scientific Systems Analyst	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Yuvaraja's College, Mysore India	B.S.	1993	Botany/Biochem/Zool.
University of Mysore, Mysore India	M.S.	1995	Biotechnology
University of Louisville, Louisville, KY US	Certificate	2006	Project Management

A. POSITIONS AND HONORS (In chronological order)**Research and Professional Experience:**

1996-96 Assistant Manager, Jayson's Agritech Pvt. Ltd., Mysore, India
 1996-97 Project Assistant, Central Food Technological Research Institute, Mysore, India
 1997-99 Research Fellow, Department of Biotechnology, University of Mysore, Mysore, India
 1999-00 Clinical Data Reviewer, Clinical Data Management Center, Bangalore, India
 2000-01 Research Scientist in Bioinformatics, Avestha Gengraine Technologies Pvt. Ltd., India
 2001-02 Group Leader, Bioinformatics, Avestha Gengraine Technologies Pvt. Ltd., India
 2002-03 Manager, Bioinformatics, Mascon Global Ltd., Princeton NJ
 2003-03 Research Assistant B, Thomas Jefferson University, Philadelphia PA
 2003-05 Res. Assoc., Systems Analysis Laboratory, U of Louisville Birth Defects Center, KY
 2005-07 Res. Scientist., Systems Analysis Laboratory, U of Louisville Birth Defects Center, KY
 2005-07 Bioinformatics Manager, Systems Analysis Laboratory, U of Louisville, Louisville KY
 2006-07 Operation Manager, Biostatistics and Computational Biology Core, Center for Environmental Genomics and Integrative Biology, University of Louisville, Louisville KY
 2007-pres Scientific Systems Analyst, Lockheed Martin Contractor at National Center for Computational Toxicology (NCCT) US EPA, RTP Durham NC

Professional Societies and Affiliations:

2000- Present Professional Member, International Society of Computational Biologists (ISCB)
 2004- Present Associate Member, Teratology Society
 2002- Present Planning Committee & Society Management Member, Bioinformatics Society of India (Inbios)
 2000- Present Member, Asia Pacific Bioinformatics Network (ApBioNET)
 2004- Present Member, African Society for Bioinformatics and Computational Biology (ASBCB)

Honors and Awards:

1997 Lady Tata Memorial Fellowship (Lady Tata Memorial Trust, Mumbai India).
 1998 Senior Research Fellowship (Central Scientific and Industrial Research, Govt of India New Delhi, India)
 2006 Young Investigator Travel Awards, 46th Annual Meeting of The Teratology Society Meeting at Tucson, Arizona.

Special Recognition: Elected to Inbios Management Group, Bioinformatics Society of India (INBIOS) (2002-pres) ; Research!Louisville: 3rd place, Innovation in Biotechnology (2004); Committee Co-Chair, Issues

and Protocols in Bioinformatics Education, Bioinformatics Society of India(2005-pres). Member, Web Site Committee Teratology Society (2005-pres; Chair of the Committee 2007-2008)

B. SELECTED PEER-REVIEWED PUBLICATIONS (in chronological order).

1. S. Ahuja, S. K. Bagga*, R. Keith, G. G. Nair, **A. V. Singh** and R. V. S. V. Vadlamudi. (2002) Intellectual Property Rights, Indian Journal of Pharmaceutical Sciences AI-PEAR-GP Discussion of the month, Nov-Dec 2002 Issue.
2. Dr. S.Bagga, **A.V.Singh** and S. Goswami. (2002) Gene Prediction: A New Frontier in Pharmaceutical Research, II Anniversary Chronicle Pharmabiz Specials Dec 26 2002.
3. S. K. Bagga*, Laura McCarthy, S. Z. Rahman, K. Jhawar, S. Ahuja, N.Udupa, **A. V. Singh** and R. V. S. V. Vadlamudi (2003). Power Plants: Green Pharmacy, Indian Journal of Pharmaceutical Sciences, May-June 2003.
4. S. K. Bagga*, **A. V. Singh**, Vibhav Garg, Sulip Goswami and R. V. S. V. Vadlamudi. (2003) Computer Aided versus Wet Lab Drug Discovery, Indian Journal of Pharmaceutical Sciences, Jan-Feb 2003.
5. Knudsen, T.B. and **Singh, A.V.** (2005) How can we use bioinformatics to predict which agents will cause birth defects? In: *Primer in Teratology* (B. Hales and A. Scialli, eds) Chapter 17a (in press).
6. **Singh AV**, Knudsen KB and Knudsen TB (2005) Computational systems analysis of developmental toxicity: design, development and implementation of a birth defects systems manager (BDSM). Reprod. Toxicol. 19: 421-439.
7. Nemeth KA, **Singh AV** and Knudsen TB (2005) Searching for biomarkers of developmental toxicity with microarrays: normal eye morphogenesis in rodent embryos. Toxicol Appl Pharmacol 206(2):219-28.
8. Knudsen KB, **Singh AV** and Knudsen TB (2005) Data input module for Birth Defects Systems Manager Reprod. Toxicol. 20(3):369-75.
9. Kinane DF, Shiba H, Stathopoulou PG, Zhao H, Lappin DF, **Singh AV**, Eskandari MA, Beckers S, Weigel S, Alpert B and Knudsen TB (2006) Gingival epithelial cells heterozygous for Toll-like receptor 4 polymorphisms Asp299Gly and Thr399Ile are hypo-responsive to Porphyromonas gingivalis. Genes & Immunity Apr;7(3):190-200.
10. Maia L. Green, **Amar V. Singh**, Yihzi Zhang, Kimberly A. Nemeth, Kathleen K. Sulik, and Thomas B. Knudsen. (2007) Reprogramming of genetic networks During Initiation of the Fetal Alcohol Syndrome. Dev Dyn. Feb;236 (2):613-31.
11. **Amar V Singh**, Kenneth B Knudsen and Thomas B Knudsen. (2007) Integrative Analysis of the mouse embryonic Transcriptome. Bioinformation, 1(10), 406-413.
12. **Amar V Singh**, Eric Rouchka, Greg Rempala, Caleb Bastian and Thomas B Knudsen. (2007) Integrative Database Management for Mouse Development: Systems and Concepts Review. Birth Defects Research (Part C) 81:1–19.
13. Deaciuc IV, Song Z, Peng X, Barve SS, Song M, He Q, Knudsen TB, **Singh AV**, and McClain CJ (2007) Genome-wide transcriptome expression in the liver of a mouse model of high carbohydrate diet-induced liver steatosis and its significance for the disease. Hepatology International (in review)

B. RESEARCH SUPPORT

Ongoing Research Support

NIH 2 R56-AA13205-05 Knudsen (PI) 07/01/07 – 05/31/08
Response Signatures of Alcohol Related Birth Defects
Gene expression profiling to probe the origins of alcohol-related birth defects in C57BL/6J (sensitive) versus C57BL/6N (insensitive) mouse embryos.
Role: Key Personnel

NIH R21-ES013821 Knudsen (PI) 07/01/05 – 05/31/08
Perinatal Breast Cancer Programming: fat and estrogens
Explores the fetal environmental origins of breast cancer in a conditional p53 mutant mouse.
Role: Key Personnel

NIH P30 ES014443 Ramos (PI) 06/04/07 – 03/31/11
Center for Environmental Genomics and Integrative Biology
Core grant to support basic and applied investigations in the emergence of environmental systems biology.
Role: Operation Manager, Biostatistics and Computational Biology Core

NIH 1 RO1-DE017384-01A2 Kinane (PI) 12/01/07 – 11/30/12
Epithelial cell TLRs in disease susceptibility
Response of gingival epithelial cells to microbial challenges linked to toll-like receptor.
Role: Key Personnel

Pending Research Support

NIH 1 RO1-ES015295-01A1 Schneider (PI) 07/01/07 – 06/30/12 score 173
Environment and Gene Effects on Brain and Behavior
Role: Key Personnel of subcontract from Thomas Jefferson University

NIH 1 P42 ES014528-01A1 Knudsen (PI) 04/01/08 – 03/31/13 pending
Early Life Exposure to Hazardous Waste Substances
Role: Co-I Project 1

Completed Research Support (last 3-years)

NIH 1 RO1-AA13205 Knudsen (PI) 09/29/01 – 08/31/06
NIH/NIAAA, Response Signatures of Alcohol Related Birth Defects
Role: Key Personnel

NIH RO1-ES09120 Knudsen (PI) 02/01/98 – 05/31/07
NIH/NIEHS, Environmental Impact on the Embryonic mtDNA Genome
Role: Key Personnel

CDC RFA AA044 Kinane (PI) 07/10/05 – 07/09/07
Repository for Understanding Host-Microbe Interactions in Periodontal Pathogenesis
Role: Key Personnel